



# **U.S. ARMY PROPOSED UTAH CHEMICAL AGENT RULE (UCAR) FOR CONSIDERATION BY THE STATE OF UTAH**

**Revised Waste Listings,  
Land Disposal Restrictions  
and Exemptions for  
Nonhazardous Wastes**

**VOLUME 1  
PROPOSED RULE AND  
SUPPORTING PREAMBLE**

**Prepared by:**

**U.S. Army Land Disposal Restrictions - Utah Group (LDRUG)  
Department of the Army**

**May 1999**

## FOREWORD

On July 1, 1988, the State of Utah, Department of Environmental Quality, Division of Solid and Hazardous Waste (DSHW), modified its Solid and Hazardous Waste Regulations under R315-2-10 and R315-2-11 to add specific chemical agents and associated wastes to its lists of hazardous wastes. Chemical agents and associated wastes were not then and are not now listed by the U.S. Environmental Protection Agency (EPA) under the Federal Resource Conservation and Recovery Act (RCRA); hence, these wastes, while classified as hazardous within the State of Utah, are not classified as hazardous wastes under the federal RCRA program.

On January 6, 1995, DSHW announced a public Initial Scoping Meeting for plans to reexamine its current hazardous waste listings for agent wastes, and to establish land disposal restriction (LDR) treatment standards for those wastes. The public meeting was held on February 13, 1995. During the meeting, DSHW outlined the new program, focusing on information requirements that were perceived to be needed from the Army to support the rulemaking effort. Several information requirements were identified, and the Army committed to responding to the state's request for that information.

The Army designated its Soldier and Biological Chemical Command (SBCCOM) [formerly the Chemical and Biological Defense Command (CBDCOM)] as the lead agency to work with DSHW in providing the information necessary to develop and support a rulemaking. The SBCCOM subsequently established the Land Disposal Restrictions – Utah Group (LDRUG, also referred to herein as the group) to work with DSHW on the rulemaking. The group was established to coordinate the Army's efforts to provide the state with relevant information as it proceeds towards the proposed and final rule.

On February 28, 1996, the DSHW met with the group to discuss plans for developing the proposed rule. During the meeting, DSHW provided the group with the state's initial draft of the *Administrative Rulemaking Chemical Agent Listing Land Disposal Restrictions* and invited the group to submit comments on the draft administrative rule. The group then developed preliminary comments, which were predicated on three basic principles:

- *Chemical agents should be regulated in the same manner as are similar toxic materials generated by private industry.*
- *The primary basis for determining the level or stringency of regulation should be the potential risk that a release of a substance would pose to human health and the environment.*

- *There should be a reasonably acceptable relationship between the cost of a regulation and its anticipated benefits.*

The DSHW and the Army group met several times after the February 28, 1996, meeting to discuss various aspects of the rulemaking. During these meetings, the principles identified above were accepted as the guiding principles for development of the proposed rule, and various aspects of the proposed rule were reviewed. Considering the amount and complexity of detailed information that was perceived to be needed to support the proposed rule, the group offered to assume an active role in the rulemaking effort and prepare the initial draft of the proposed rule. DSHW recognized that the military, and the Army in particular, is the nation's expert with respect to conventional and chemical munitions and that the Army's input would be critical to the rulemaking effort. DSHW agreed that it was appropriate for the Army group to draft the initial version of the proposed rule, with input from the state. It was fully recognized by both parties, however, that once the proposed rule was drafted and provided to the State of Utah, further development of the proposed rule would be the responsibility of the state. To facilitate the state's processing of the proposed rule, the LDRUG drafted the proposed rule and supporting preamble as if they were written by the state.

The Army's version of the proposed rule, including a "Road Map" to the rule and the supporting preamble, is presented in Volume 1. Volume 2 includes various background documents that were prepared by the Army to support the rulemaking effort.

The proposed Utah Chemical Agent Rule (UCAR) begins with a "Road Map" that describes the major sections of the rule and what they entail. A flow diagram that depicts the decision process for the UCAR is included as part of the Road Map. The Road Map is not officially part of the proposed rule. It is intended to facilitate review and understanding of the major elements of the rule, what they entail, and how they relate to each other. To help differentiate the Road Map from the Proposed Rule and the supporting Preamble, the page numbers appear as follows:

- Page numbers for the Road Map are RM-1, RM-2, etc.
- Page numbers for the Proposed Rule are PR-1, PR-2, etc.
- Page numbers for the Preamble are P-1, P-2, etc.

## **Membership of the Army LDRUG**

The membership of the Land Disposal Restrictions – Utah Group (LDRUG) includes regular Army and civilian staff from several agencies and organizations:

- U.S. Army Soldier and Biological Chemical Command
- U.S. Army Center for Health Promotion and Preventive Medicine
- U.S. Army Deseret Chemical Depot
- U.S. Army Dugway Proving Ground
- U.S. Army Edgewood Chemical Biological Center
- U.S. Army Environmental Center
- U.S. Army Test and Evaluation Command
- U.S. Army Program Manager for Chemical Demilitarization
- U.S. Army Program Manager for Non-Stockpile Chemical Materiel
- U.S. Army Tooele Chemical Agent Disposal Facility
- U.S. Army Chemical Agent Munitions Disposal System

Technical support for the group activity was provided by Argonne National Laboratory.

This Page Intentionally Left Blank

## **Document Contents**

### **Volume 1:**

Road Map to the Proposed Rule

Proposed Rule

Supporting Preamble

### **Volume 2:**

Background Document A: List of Acronyms

Background Document B: Chemicals Proposed for Regulation

Background Document C: Chemicals Evaluated But Not Selected as  
Constituents of Concern

Background Document D: Material Safety Data Sheets (MSDSs)

Background Document E: Derivation of Health-Based Environmental  
Screening Levels (HBESLs) for Chemical  
Warfare Agents

Background Document F: Development and Review Process of Interim  
Army Chronic Toxicological Criteria — General  
Chronology and Points of Contact

Background Document G: Monte Carlo Modeling Output

Background Document H: Incineration as a Land Disposal Restriction  
Treatment Technology for Chemical Agent  
Associated Waste

Background Document I: Chemical Neutralization as a Land Disposal  
Restriction Treatment Technology for Chemical  
Agent Associated Waste

This Page Intentionally Left Blank